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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/439,889 11/12/99 SHI

S 99.841

020306 HM22/0329
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EXAMINER

NAFF, D.

ART UNIT

PAPER NUMBER

1651

DATE MAILED:

03/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/439859

Applicant(s)

Shi et al

Examiner

N/A

Group Art Unit

1651

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 11/12/99
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-6 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-6 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 21
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Claims examined on the merits are 1-6 which are all claims in the application.

The following is a quotation of the first paragraph of 35 U.S.C.

112:

5 The specification shall contain a written description of the
 invention, and of the manner and process of making and using
 it, in such full, clear, concise, and exact terms as to enable
10 any person skilled in the art to which it pertains, or with
 which it is most nearly connected, to make and use the same
 and shall set forth the best mode contemplated by the inventor
 of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph,
because the specification, while being enabling for a method of freeze
drying as required by claim 5, does not reasonably provide enablement for
15 other methods of freeze drying. The specification does not enable any
person skilled in the art to which it pertains, or with which it is most
nearly connected, to make and use the invention commensurate in scope
with these claims.

The specification fails to describe freeze drying other than as
20 required by claim 5 by using a step of freezing followed by a step of
drying at reduced pressure. The freeze drying of the present claims
should require the steps of claim 5 to be commensurate in scope with the
specification.

The following is a quotation of the second paragraph of 35 U.S.C.

25 112:

 The specification shall conclude with one or more claims
 particularly pointing out and distinctly claiming the subject
 matter which the applicant regards as his invention.

Claim 3 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5 Claim 3 is unclear by requiring the binding substance to be linked to the porous polymer instead of the porous polymer pads. The polymer does not exist alone and has previously been required only as porous polymer pads. Therefore, the substance should be linked to the porous polymer pads rather than just to the porous polymer.

10 Claim 5 is unclear by not having clear antecedent basis for "the porous polymer array" in steps a and b. The claim preamble requires freeze drying an "array of porous polymer pads".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

15 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20 This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to
25 point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guschin et al in view of Ruchel (1974⁸) and Ruchel (1975) and Blank et al.

5 The claims are drawn to a freeze dried array of porous polymer pads on a solid surface and a method of making the freeze dried array by freezing the array and drying the array at a reduced pressure.

Guschin et al discloses drying an array of micromatrices of polyacrylamide gel pads on a support for use in immobilizing a compound such as DNA. See the abstract (page 203, left col); the paragraph
10 bridging pages 202 and 204;; page 205, left col, first complete paragraph; page 207, right col under "Microchip Fabrication"; and page 211, left col, under "CONCLUSION".

Ruchel (1974), Ruchel (1975) and Blank et al disclose freeze drying polyacrylamide gels.

15 It would have been obvious to dry the polyacrylamide gel pads on a support of Guschin et al by freeze drying since Ruchel (1974), Ruchel (1975) and Blank et al suggest that freeze drying can be successfully used to dry a polyacrylamide gel.

Any inquiry concerning this communication or earlier communications
20 from the examiner should be directed to David M. Naff whose telephone number is (703) 308-0520. The examiner can normally be reached on Monday-Thursday and every other Friday from about 8:30 AM to about 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, a
25 message can be left on voice mail.

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Art Unit: 1651

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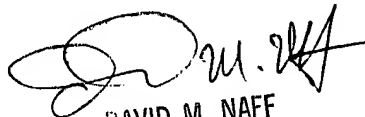
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn, can be reached at telephone number (703) 308-4743.

The fax phone number is (703) 305-3014 or 308-4242.

5 Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

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DMN
3/23/01


DAVID M. NAFF
PRIMARY EXAMINER
ART UNIT 1651